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18N1/1105

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NEW YORK, NY 10017

**NOTICE OF ALLOWANCE  
AND ISSUE FEE DUE**

- ☐ Note attached communication from the Examiner  
☐ This notice is issued in view of applicant's communication filed \_\_\_\_\_

SERIES CODE/SERIAL NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
07/130,070	12/08/87	042	MARSCHER, A	1807 11/05/93
First Named Applicant WARD, DAVID C.				

TITLE OF INVENTION  
METHODS OF USING LABELED NUCLEOTIDES (AS AMENDED)

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
1 ENZ-1 (CONT'D)	435-006.000	S29	UTILITY	NO	\$1170.00	02/07/94

**THE FEE DUE IS THE AMOUNT IN EFFECT AT THIS TIME. IF THE AMOUNT OF THE ISSUE FEE INCREASES PRIOR TO PAYMENT, APPLICANT WILL BE NOTIFIED OF THE BALANCE OF ISSUE FEE DUE.**

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT.**

**PROSECUTION ON THE MERITS IS CLOSED.**

**THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.**

**HOW TO RESPOND TO THIS NOTICE:**

- I. Review the SMALL ENTITY Status shown above.  
If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:
  - A. If the status is changed, pay twice the amount of the FEE DUE shown above and notify the patent and Trademark Office of the change in status, or
  - B. If the Status is the same, pay the FEE DUE shown above.
- II. Part B of this notice should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by charge to deposit account, Part B should be completed and returned. If you are charging the ISSUE FEE to your deposit account, Part C of this notice should also be completed and returned.
- III. All communications regarding this application must give series code (or filing date) and serial number. Please direct all communications prior to issuance to Box ISSUE FEE unless advised to contrary.

If the SMALL ENTITY is shown as NO:

- A. Pay FEE DUE shown above, or
- B. File verified statement of Small Entity Status before, or with, pay of 1/2 the FEE DUE shown above.

**IMPORTANT REMINDER: Patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**



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SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
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07/130,070 12/08/87 WARD

18N1/1105

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NEW YORK, NY 10017

D EXAMINER (CONT'D)

MARSCHER, A

ART UNIT PAPER NUMBER

46/K

DATE MAILED 12/07

11/05/93

NOTICE OF ALLOWABILITY

PART I.

- ☒ This communication is responsive to *Amendment, filed 8-27-93, term. discl. filed 10-7-93, and Suppl. declar. filed 10-7-93*
- ☒ All the claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice Of Allowance And Issue Fee Due or other appropriate communication will be sent in due course.
- ☒ The allowed claims are *126-130, 134-136, 142, 143, 150, 151-154, 156, 157, 159-183, \*185; renumbered as 33-42 and 1-32, respectively*
- ☐ The drawings filed on \_\_\_\_\_ are acceptable.
- ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received. ☐ not been received. ☐ been filed in parent application Serial No. \_\_\_\_\_, filed on \_\_\_\_\_
- ☒ Note the attached Examiner's Amendment.
- ☒ Note the attached Examiner Interview Summary Record, PTOL-413.
- ☒ Note the attached Examiner's Statement of Reasons for Allowance.
- ☐ Note the attached NOTICE OF REFERENCES CITED, PTO-892.
- ☐ Note the attached INFORMATION DISCLOSURE CITATION, PTO-1449.

PART II.

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE THREE MONTHS FROM THE "DATE MAILED" indicated on this form. Failure to timely comply will result in the ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

- ☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.
- ☐ APPLICANT MUST MAKE THE DRAWING CHANGES INDICATED BELOW IN THE MANNER SET FORTH ON THE REVERSE SIDE OF THIS PAPER.
  - ☐ Drawing informalities are indicated on the NOTICE RE PATENT DRAWINGS, PTO-948, attached hereto or to Paper No. \_\_\_\_\_. CORRECTION IS REQUIRED.
  - ☐ The proposed drawing correction filed on \_\_\_\_\_ has been approved by the examiner. CORRECTION IS REQUIRED.
  - ☐ Approved drawing corrections are described by the examiner in the attached EXAMINER'S AMENDMENT. CORRECTION IS REQUIRED.
  - ☐ Formal drawings are now REQUIRED.

Any response to this letter should include in the upper right hand corner, the following information from the NOTICE OF ALLOWANCE AND ISSUE FEE DUE: ISSUE BATCH NUMBER, DATE OF THE NOTICE OF ALLOWANCE, AND SERIAL NUMBER.

Attachments:

- ☒ Examiner's Amendment
- ☒ Examiner Interview Summary Record, PTOL-413
- ☒ Reasons for Allowance
- ☐ Notice of References Cited, PTO-892
- ☐ Information Disclosure Citation, PTO-1449

- ☐ Notice of Informal Application, PTO-152
- ☐ Notice re Patent Drawings, PTO-948
- ☐ Listing of Bonded Draftsmen
- ☐ Other

*M. Parr*  
MARGARET PARR  
SUPERVISORY PATENT EXAMINER  
GROUP 1800

Applicants are hereby informed that the amendment filed 8/27/93, which was previously indicated as denied entry in the Advisory Action mailed 9/24/93, has been entered.

An Examiner's Amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 C.F.R. § 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the Issue Fee.

An extension of time under 37 C.F.R. § 1.136(a) is required in order to make an Examiner's Amendment which places this application in condition for allowance. During a telephone conversation conducted on 10/25/93, Ron Fedus requested an extension of time for an additional 2 months and authorized the Commissioner to charge Deposit Account No. 05-1135 the required fee for this extension and authorized the following Examiner's Amendment. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 C.F.R. § 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the Issue Fee.

In the claims:

In claim 150, line 15, after "wherein B and A are"; insert --covalently--.

Cancel claim 155, without prejudice.

In claim 157, line 3, after "enzyme"; insert --capable of depositing insoluble reaction products--.

Cancel claim 158, without prejudice.

In claim 161, lines 3-4, delete "reacting with a substrate to form a detectable product"; and insert therefor --depositing insoluble reaction products--.

In claim 168, line 2, delete "compound"; and insert therefor --of said compounds--.

In claim 168, line 3, delete "compound"; and insert therefor --of said compounds--.

In claim 171, lines 3-4, delete "reacting with a substrate to form a detectable product"; and insert therefor --depositing insoluble reaction products--.

The following is an Examiner's Statement of Reasons for Allowance:

The invention is directed to methods of detection of nucleic acids using a hybridization probe that contains modified bases that are modified by covalent labeling with an A moiety attached at either the 7-position of 7-deazapurine or the 5-position of pyrimidine. The A moiety contains at least three carbon atoms and mediates the production of a detectable signal.

The prior art of record teaches various nucleotide base modifications including at the above two linkage points but this prior art does not teach or suggest that such modified bases can be incorporated into nucleic acid probes by enzymatic means or that probes containing such modifications are still efficient hybridization probes. It is noted that a divisional application to the instant application has been previously issued as patent number 4,711,955; directed to biotin and iminobiotin label types

as species of the above discussed A moiety.

The terminal disclaimer has been instantly filed on 10/27/93 to obviate and prevent an obviousness-double patenting rejection over claims 15-20 of patent number 4,711,955 which suggests hybridization methods via the hybrid formation cited in said claims 15-20.

The supplemental Declaration under 37 CFR § 1.131 has been instantly filed on 10/27/93 to perfect a previous Declaration and to obviate and prevent a rejection over the reference cited as Langer III; Abstract 1153, J. Supramolecular Structure and Cellular Biochemistry (Suppl. 5) (1981) of a presentation given on December 11, 1980.

Any comments considered necessary by applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably accompany the Issue Fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Papers related to this application may be submitted to Group 180 by facsimile transmission. Papers should be faxed to Group 180 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989).

The CM1 Fax Center number is (703) 305-3014 or (703) 308-4227.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ardin Marschel, Ph.D., whose telephone number is (703) 308-3894.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

AM

A. MARSCHEL:am

October 26, 1993

M. Parr

MARGARET PARR  
SUPERVISORY PATENT EXAMINER  
GROUP 1800